



IDEM's Surface Water Quality Assessment Program

Total Maximum Daily Load (TMDL) Program

Program Objective

The objective of this program is to develop and implement Total Maximum Daily Loads (TMDLs) to achieve state water quality standards. Section 303(d) of the Clean Water Act requires the development of TMDLs for waters that the State has identified as being impaired. These TMDLs must be established at levels necessary to attain and maintain the applicable water quality standards for designated uses. To accomplish this, TMDLs will set Waste Load Allocations (WLAs) for point source discharges and a set of specific requirements and best management practices for non-point source abatement of toxic pollutants. In order to implement the TMDL Program, IDEM will characterize parameters of concern and the extent and magnitude of the impairment in a waterbody, develop TMDLs that will ensure the attainment of water quality standards in these impaired waters, and finally implement the TMDLs through point and non-point source programs. The TMDL process for each impaired waterbody will take two to three years and will involve three major steps: Planning, Sampling/Data Collection, Modeling and Implementation. The data collection process will include the compilation and review of existing data, and collection and analysis of additional new data necessary for modeling. The next steps include developing the appropriate models, and implementing the strategies necessary to reduce the pollutant loading from point and non-point sources to achieve water quality standards for designated uses. It is anticipated that the first year will be used in planning and sampling/data collection, the second year for modeling the TMDLs and writing the required reports, and the third year for implementation. Throughout the process, identification of stakeholders, public participation and outreach activities will be important to the successful implementation of the TMDL.

Program Participants

The TMDL Program is operated through the efforts of the Toxicology and Chemistry, Surveys, and Biological Studies Sections of the Assessment Branch in coordination with staff from the Watershed Management and Water Quality Standards Sections of the Planning and Restoration Branch, and with support from the Permit Branch. Primarily, the Assessment Branch will be responsible for the Planning, Sampling/Data Collection and Modeling aspects of TMDLs, whereas the Permit Compliance Branch and the Planning and Restoration Branch will direct the Implementation aspects through point and non-point source programs. Initially, contractor support will be used for the development of the first TMDLs with the possibility of augmenting future program activities. TMDL development will also be conducted cooperatively with the U.S. Army Corps of Engineers (USACE) and the Ohio River Valley Water Sanitation Commission (ORSANCO). Laboratory support comes from the Indiana State Department of Health (ISDH), the U.S. Geological Survey (USGS) as well as the Office of Water Quality private contract laboratories.

Program Description

Media:	Surface Water and Sediments: rivers, streams and lakes.
Study Area:	Statewide, select impaired waterbodies and watersheds in a major river basin.
Site Selection Type:	Impaired waterbodies from the 303(d) list. As of 1998, 208 impaired waterbodies in 5 major river basins have been identified for TMDL development.
Sampling Sites:	To be determined by the specific parameter of impairment and locations of impaired waterbodies in a watershed.
Sampling Frequency:	To be determined by the specific parameter of impairment and locations of impaired waterbodies in a watershed. Sampling will be limited to the July through October field season.
Data Collected:	Field Data: pH, temperature, dissolved oxygen, conductivity, turbidity, etc. Water Chemistry Data: Parameter of concern in each watershed. Bacteriological Data: <u>E. coli</u>

Program Product(s)

- ▶ Watershed Characterization Report selected for TMDLs.
- ▶ Periodic Interim Technical Reports on development of TMDLs.
- ▶ TMDL Final Reports for each impaired waterbody on the 303(d) list.

Technical Notes

- ▶ Contributions to the Indiana Biennial 305(b) Report.
- ▶ Development of the 303(d) List of Impaired Waterbodies.
- ▶ Development of appropriate steady-state and dynamic models for TMDL development.

Contact Information

Cynthia L. Wagner, Senior Environmental Manager & TMDL Program Manager

Indiana Department of Environmental Management
Office of Water Quality – Assessment Branch
Environmental Toxicology and Chemistry Section
P.O. Box 6015 - Shadeland
Indianapolis, IN 46206-6015
(317) 308-3214
fax (317) 308-3219
E-mail: cwagner@dem.state.in.us

<p>IDEM Information: (317) 233-1044 or 800-451-6027 800-743-3333(TDD) toll-free for Indiana residents</p> <p>EnviroLine: (317) 232-8603 or 800-451-6027 toll-free for Indiana residents</p> <p>Fax on Demand: 800-726-8000</p> <p>Internet: www.state.in.us/idem</p>	<p><u>For More Information on IDEM's Office of Quality...</u></p> <p>Assessment Branch (Surface water quality: river, streams and lakes) Shadeland Office, Indianapolis (317) 308-3173</p> <p>Permitting Branch (NPDES permits) Indiana Government Center North, Indianapolis (317) 232-8675</p> <p>Compliance Branch (facilities assistance, inspections and compliance) Indiana Government Center North, Indianapolis (317) 232-6770</p> <p>Drinking Water Branch (Public water supply and ground water protection) Shadeland Office, Indianapolis (317) 308-3280</p> <p>Planning & Restoration Branch (Water quality standards/rules, grants and loans) Indiana Government Center North, Indianapolis (317) 233-8488</p>
--	---